RENEWABLE ENERGY ASSISTANCE PACKET:
A Compendium of Resources for Local Governments

Third Edition

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LOCAL GOVERNMENT COMMISSION

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INTRODUCTION

When it comes to energy, California's local governments have been innovators for a long time. With electricity and natural gas price spikes and mounting evidence of global climate change, cities, counties, and other local agencies can play a large role in fostering creative solutions that reduce costs, boost reliability, and shrink the environmental footprints linked to energy production and consumption.

One strategy is through distributed renewable energy systems, which growing numbers of local governments are installing in response to a variety of state financial incentives. These rebates can cover a substantial portion of the installation costs of a new solar photovoltaic (PV), wind, solar thermal, or fuel cell system. A combination of rebate incentives, low-interest financing, and innovative procurement strategies make distributed generation, combined with energy efficiency measures, a cost-effective option for the public sector. Distributed generation can benefit communities in many ways, including:

- Stabilizing long-term energy prices and reducing future fossil fuel price risks for public facilities;
- Ensuring a reliable supply of energy;
- Budgeting for fixed energy costs;
- Reducing the need for large, central power plants;
- Improving air quality;
- Off-setting peak load demand; and
- Contributing toward diversification of the state-wide energy portfolio.

Renewable energy also supports economic development. A World Wildlife Fund study released in October 2001 indicates that energy efficiency policies and development of renewable energy resources could result in 750,000 new jobs nationwide over the next nine years and 1.3 million jobs by 2020. According to the study "Clean Energy: Jobs for America's Future" the U.S. Gross domestic product (GDP) would also increase by $23 billion by 2010 and continue to grow under such conditions. Clearly, renewable technologies have an important role to play in our national and state economies.

A study conducted by the California Public Interest Research Group (CALPIRG) Charitable Trust in June 2002 reached a similar conclusion. The study found that an increased level of renewable energy development would create 28,000 year-long construction jobs and 3,000 permanent jobs, while the equivalent amount of new natural gas-fired power would generate only one-fourth as much employment for California. The report, Renewables Work: Job Growth from Renewable Energy Development in California, is available on-line at www.calpirg.org.

The State of California has recognized the benefits of renewable generation. It has passed legislation to require renewable generation, to help pay for it, and to overcome some local barriers to its siting. The State's Renewable Portfolio Standard mandates that 20% of electricity generation in California will be from renewable resources by 2017. Since 1998 California has offered incentives that significantly reduce the cost of renewable energy generation systems. The State has also enacted laws that supersede local ordinances unfriendly to small wind systems and that void CC&R restrictions on renewable energy.

Renewable technologies also play an important role in reducing peak-load demand and stabilizing California's electrical grid. Public facilities – specifically those with flat or south-facing rooftops – make especially good host sites for PV systems. A study conducted by the Department of Energy's National Renewable Energy Laboratory (NREL) for the Local Government Commission in October 2000 revealed that California's cities and counties have the potential to generate nearly 200 megawatts (MW) of PV, while California's public school rooftops could produce 1,500 MW. This is roughly equivalent to the electricity required for 1.5 million homes. (To view a copy of the report, visit www.lgc.org/spire.)

Recognizing this potential, the Local Government Commission launched the Stimulating Public-sector Implementation of Renewable Energy (SPIRE) program in August 2001 under a grant from the California Energy Commission's (CEC) Renewable Energy Consumer Education Program. The program recognizes PV as the most widely applicable technology currently available to the public sector. PV technology is discussed in greater detail in the CEC's "Solar Photovoltaics" fact sheet — available in **Appendix A** and at www.energy.ca.gov/renewables/marketing/2000-05_PV_FACTS.PDF. SPIRE can also provide resources for municipal small wind, fuel cell, and solar thermal energy systems.

SPIRE's *Renewable Energy Assistance Packet: A Compendium of Resources for Local Governments* is designed to help California local governments, schools and special districts with the implementation of renewable energy. This document summarizes the rebate incentives, financing opportunities, procurement options and technical assistance that is available to the public sector. A complete list of SPIRE resources is located under "Free Technical Assistance" at the end of this document.

The *Renewable Energy Assistance Packet* and other resources are available at www.lgc.org/spire.

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RENEWABLE ENERGY POLICIES AND PROGRAMS

Local government is well-positioned to encourage residents and local businesses to generate a portion of their own power from clean, renewable sources. In light of the State's 2000 – 2001 energy crisis, escalating electrical rates, and concern over threats to community security, local governments can support clean, distributed generation that increases local generation capacity, helps to stabilize prices, and decentralizes electrical generation. Distributed renewable energy generation is being increasingly recognized as an important aspect of smart energy planning, disaster preparedness, and energy-related fiscal management.

There are numerous ways for local government to support generation of distributed renewable energy. These include 1) the adoption of codes, policies, and ordinances that support residential and commercial installation of solar photovoltaics and small wind turbines, 2) the creation of a city/county-wide renewable energy program for residents and businesses, and 3) installation of renewable energy systems on municipal facilities. The following section discusses the first two options. The remainder of this document explores opportunities for renewable energy projects on municipal facilities.

POLICIES, CODES AND ORDINANCES

In the November/December 2001 issue of *Currents*, the Local Government Commission reported on municipalities that have enacted policies to support distributed renewable energy systems. For example, Alameda and Marin Counties and the cities of Oakland, San Jose and Santa Monica have passed emergency measures to reduce the cost and time involved with siting PV and wind systems. This article, titled "Local Governments Key to Distributed Renewable Technology Successes" is available at: www.lgc.org/freepub/energy/newsletter/nov_dec2001/ed22.html.

In February, 2003, the LGC will offer a fact sheet addressing local policies, codes and ordinances that support renewable energy generation. The fact sheet, as well as links to referenced policies, codes, and programs, will be available at www.lgc.org/spire. Some examples of policies, codes and ordinances are included below:

- Enacted in May 2001, the City of Oakland's new emergency ordinance limits review of solar PV and small wind turbine applications to five days and waives application fees that can range from $397 to $1,088. The City's "Self-certification Checklist" provides for exemption for the design review process for qualifying Renewable Energy Production Facilities.

- San Diego County has also streamlined the permitting process for solar PV systems, waiving a $100 application fee and eliminating other costly paperwork burdens. These changes in San Diego County regulations are predicted to increase the number of solar permits from a dozen annually to 250 this year and perhaps as many as 1,000 in the future.

- Marin County's Single Family Dwelling Energy Efficiency Ordinance, adopted in October, 2002, requires that all dwellings 3,500 square feet or larger constructed in the unincorporated part of the county meet the Title 24 Energy Efficiency requirements for a 3,500 square foot home. The goal of the ordinance is to reduce energy consumption of

large homes through energy efficiency measures and/or by supplementing energy use with renewable energy. The ordinance is available at: www.co.marin.ca.us/depts/CD/main/pdf/BEST_pdf/Ordinance_3356.pdf

- The City of Pleasanton adopted an Energy Plan in December 2002 to address green building, energy efficiency, and renewable energy. Policy recommendations integrate education; demand reduction; policies, programs, ordinances and legislation; financing; alliance building; and improved energy supply – including distributed renewables. The plan recommends exploring all manners of financing including public/private partnerships, bulk purchases, power cooperatives, revenue bonds and utilizing third parties. It suggests adopting an Energy Element in the General Plan, a green building ordinance, and a generator facility siting ordinance, work on which is already underway. And it designates staff to monitor state and federal legislation, programs and funding opportunities. The City is now implementing the plan, beginning with a solar photovoltaic installation on a new LEED-certified fire station.

Samples of energy codes are also available on-line through the U.S. Department of Energy's Smart Communities Network at www.sustainable.doe.gov/municipal/codtoc.shtml and through the Database of State Incentives for Renewable Energy at www.dsireusa.org.

At the State level, California passed legislation that enforces the right to install renewable energy systems. AB 1207 makes it illegal to deny a permit for a small wind system after July, 2002. The bill mandates that if local governments fail to adopt wind power-friendly ordinances by July 1, 2002, a default ordinance takes effect that fast-tracks approval of a small wind turbine that meets a variety of conditions. Similarly, the California Solar Rights Act of 1978 precludes legislative bodies, including those of chartered cities, from enacting ordinances restricting or prohibiting the use of solar energy systems, other than for health and safety purposes. SB 1534, signed into law in September 2002, precludes homeowner's associations and subdivision developers from prohibiting solar installations.

The following resources may be helpful in educating staff to facilitate solar/wind permit approval.

- The California Energy Commission's "Guide to Photovoltaic System Design and Installation" (available at www.energy.ca.gov/reports/2001-09-04_500-01-020.PDF).
- The National Electric Code
- Underwriter Laboratories codes UL 1703 and UL 1741, which address safety for flat plate PV modules and panels, and static inverters and charge controllers for use in PV systems, respectively.
- California Wind Energy Consortium's Small Wind Information Center addresses the issues of siting and permitting for small wind turbines (cwec.ucdavis.edu/smallwind/).
- Upcoming CEC trainings on local permitting for renewable energy systems. Contact the CEC at (916) 651-6197 to inquire.

PROGRAMS

Local governments can incentivize renewable energy through a variety of programs. Several municipalities have taken the leap to encourage on-site renewable energy generation for business- and home-owners.

- Marin County's Building Energy Efficient Structures Today (BEST) program encourages energy efficient buildings and renewable energy projects through fee rebates, technical assistance, and an expedited permit processing. The County offers a $300 rebate in addition to the State incentive program to encourage efficiency and renewable on-site generation. Other BEST activities include working on changes to the Development Code to make it more energy-friendly, and hosting energy efficiency trainings for the public and county staff. For more information, contact Sam Ruark in Marin County Planning at (415) 507-2659.

- The Solar Sebastopol Program was initiated by city officials following a feasibility study conclusion that local government plays an important role in facilitating investment in PV electricity by reducing the financing and transaction costs for residents and businesses. The program could install up to 1,000 kW of PV systems in schools, single-family homes, apartment buildings and large commercial properties throughout the community. More detailed information about the program is included in a Nov/Dec 2002 *Currents* article titled, "Small Cities Help Residents and Businesses Go Solar". The article is available on line at www.lgc.org/freepub/energy/newsletter/nov_dec2002/ed28.html.

- The City of Arcata, in cooperation with the Humboldt Energy Task Force, is encouraging Humboldt County residents to go solar. A Solar Guidebook, developed by the Renewable Energy Development Institute under contract with the City, helps potential solar energy owners size a system to meet their needs and perform a simple economic analysis of the system. The City of Arcata is working with local lenders to finance renewable energy systems and plans to pursue PV installation on city facilities. To download the guidebook, visit www.arcatacityhall.org/energy/energyprogram.html.

- The City of Palm Desert started a Solar Assistance Program in June 2001 with the procurement of 600 solar panels which were sold to residents and business owners. By aggregating the purchase of solar panels, the City bought the panels at a considerable savings and passed on the savings to residents and business owners within city limits. Three hundred seventy panels have been sold and the remaining 230 will be used on a parking canopy for city employees. For more information on the program, contact (760) 346-0611.

- The City of San Ramon is working with ICF Consulting to complete a detailed study that will evaluate the City's opportunities and options for developing a residential solar program to promote and encourage the installation of PV on existing and new homes. The study is expected be completed and presented to the City Council in February 2003.

ECONOMICS OF RENEWABLE ENERGY

A combination of state rebate incentives, low-interest financing and smart procurement strategies can help make renewable, distributed generation — especially when combined with energy efficiency measures — a cost-effective option for the public sector's energy needs. Investing in renewable energy resources can guarantee stable, long-term energy prices and supply while helping to budget for fixed energy costs. Local governments, special districts and schools can cut their long-term energy costs by taking advantage of rebate incentives and financing opportunities. In the "Tools for Economic Analysis" section that follows, resources for life-cycle costing analysis will be discussed.

REBATE INCENTIVES

The California Energy Commission (CEC) and IOUs offer rebates that significantly buy-down the cost of a solar PV, small wind turbine, fuel cell, or solar thermal system. Individual municipal utilities also offer rebates to their customers. Check with your local utility provider for details. For a list of rebate incentives and amounts, visit The California Solar Center website at www.californiasolarcenter.org/incentives.html. For a list of rebate incentives throughout the nation, visit the Database of State Incentives for Renewable Energy (DSIRE) on line at www.dsireusa.org.

California Energy Commission's Emerging Renewable Technology Buy-Down Account

Since 1998, the State of California has offered buy-down incentives that significantly reduce the cost of renewable generation systems. California Senate Bill 1038 allowed the California Energy Commission to use funding for the renewable energy buy-down from January 2002 through 2006. California local governments are eligible for rebates for solar PV, small wind, solar thermal, and fuel cell systems using renewable resources. As of the writing of this document, proposed changes, effective March 3, 2003, to the program include a decrease to $4.00/watt for photovoltaic systems and $2.50/watt for small wind systems. Incentives will decline by $0.20 per watt every six months, with the first decline beginning July 1, 2003. Other proposed changes to the buy-down program include elimination of the of rebate funds for municipal utility customers. Proposed changes will be considered for adoption on February 19, 2003. For more detailed information, visit www.consumerenergycenter.org. The CEC's Guidebook for the Renewable Energy Buy-Down Program is available at, www.energy.ca.gov/renewables/documents or by calling 800-555-7794.

Self-Generation Incentive Program

As part of California Assembly Bill 970, the California Public Utilities Commission (CPUC) approved a Self-Generation Program on March 27, 2001. This program provides monetary incentives for utility customers to produce part of their own energy through "self-generation". Self-generation is electrical generation technology installed on the customer's site that provides electricity for part or all of a customer's electric needs. Greater incentives are provided for super clean technologies and use of renewable fuels, such as digester gas and landfill gas.

The Self-Generation Incentive Program is administered by each of the IOUs with the exception of San Diego Gas and Electric whose program is administered by the San Diego Regional

Energy Office. It provides a financial incentive for the installation of new, qualifying self-generation equipment installed at a facility. Systems up to 1.5 mega-watts (MW) in size are eligible. However, the incentive will only be granted on the first 1 MW of generating capacity of systems larger than 1 MW. Self-generation systems must be at least 30KW in size to be eligible for the rebate. Rebate incentives vary according to the technologies. Renewable technologies including PV, fuel cells operating on renewable fuel, solar thermal and small wind turbines are eligible for $4.50 per watt, up to half the cost of the system. Other non-renewable technologies are eligible for rebates of $1.00 - $2.50 per watt. For more information on the Self-Generation Incentive Program, contact:

Pacific Gas & Electric
Self-Generation Incentive Program
P.O. Box 770000
Mail Code B29R
San Francisco, CA 94177
www.pge.com/selfgen/
(800) 555-7794

San Diego Regional Energy Office (for San Diego Gas and Electric)
Mike Magee, SELFGEN Program Manager
www.sdenergy.org/selfgen
(858) 244-1177
selfgen@sdenergy.org

Southern California Edison
www.scespc.com/sgip.nsf
(800)736-4777

Southern California Gas Company
www.socalgas.com/business/selfgen/
(800) GAS-2000

Renewable Energy Production Incentive

Authorized under section 1212 of the Energy Policy Act of 1992, the federal Renewable Energy Production Incentive (REPI) provides incentive payments for electricity produced and sold by new qualifying renewable energy generation facilities. Eligible electric production facilities are those owned by state and local government entities (such as municipal utilities) and not-for-profit electric cooperatives that started operations between October 1, 1993 and September 30, 2003. Over 30 local governments are currently accessing REPI incentives. Qualifying facilities are eligible for annual incentive payments of approximately 1.8 cents per kilowatt-hour for the first ten year period of operation, subject to the availability of annual appropriations in each federal fiscal year of operation. Criteria for qualifying facilities and application procedures are contained in the rulemaking for this program. Qualifying facilities must use solar, wind, geothermal (with certain restrictions as contained in the rulemaking), or biomass (except for municipal solid waste combustion) generation technologies.

Local governments may request pre-qualification for the REPI by contacting the U.S. Department of Energy Office in Golden, Colorado by mail. The letter should be on local government letterhead and include the following: request for pre-qualification for REPI and a description of annual system output in kWh. For more information, visit www.eren.doe.gov/power/repi.html, or contact Larry Mansueti at the U.S. Department of Energy: (202) 586-2588. Requests for pre-qualification can be sent to:

Attn: Keith Bennett
U.S. Department of Energy
Energy Efficiency and Renewable Energy
Denver Regional Office
1617 Cole Boulevard, MS-1521
Golden, CO 80401

FINANCING RENEWABLE ENERGY SYSTEMS

The general concept behind using low-interest loans to finance renewable energy systems is that avoided energy costs resulting from on-site energy generation can be used as a revenue stream to repay the loans. Some jurisdictions have found that avoided energy costs are greater than the amortized cost of the system. For example, in 2001 Alameda County saved over $400,000 in utility costs at the Santa Rita Jail, where 642 kW of PV and several energy efficiency technologies were installed. The system was subsequently expanded to 1.16 MW. Savings to the County (and taxpayers) are expected to total $15 million over the life of the system.

There are numerous low-interest, long-term financing options for renewable energy systems available to municipalities. State agencies including the California Energy Commission and the California Consumer Power and Conservation Financing Authority (Power Authority) offer financing for energy projects. Currently, the CEC is offering energy-efficiency loans at a fixed 4% rate for cities, counties, special districts, schools and hospitals. California Communities — a joint powers authority between the League of California Cities and California State Association of Counties — offers financing with fewer restrictions, but slightly higher rates. Many of these options are summarized in the CEC's "Institutional Financing Options for Renewable Energy Systems" fact sheet — available in **Appendix B** and at www.energy.ca.gov/renewables/marketing/2001-10_INSTITUTION_FINANCE.PDF.

Alternatively, funds for distributed generation can be raised locally by floating revenue bonds, similar to the $100 million bond passed by referendum in San Francisco in November 2001. The options are discussed below. A comprehensive list of financing resources is provided on the Solar Financing CD ROM, produced by the National Renewable Energy Laboratory and Renewable Energy Development Institute. Copies are available through the LGC at (916) 448-1198 x324, or apernell@lgc.org.

California Energy Commission's Energy Efficiency Financing

The California Energy Commission's Energy Efficiency Financing Program provides 4% financing for schools, hospitals and local governments through low-interest loans for feasibility studies and the installation of energy-efficiency measures. Existing buildings, some new construction or other energy-using facilities (i.e., pumps and outdoor lights) are eligible for financing. Renewable energy projects are eligible for financing, provided the project meets loan term criteria. Call (916) 654-4008 to discuss eligibility, or send e-mail to: nonres@energy.state.ca.us. A complete application packet is included in **Appendix C**.

California Communities' CaLease Finance Program for Alternative Energy

California Communities is a state-wide joint powers authority sponsored by the League of California Cities and the California State Association of Counties. California Communities' CaLease program provides public agencies with the ability to finance real property, equipment or other capital projects without the expense or complexity of traditional bond issuance. Utilizing the same approach as the CaLease Equipment Lease Program, the intent of the alternative energy program is to privately place all PV system financing for local government and school districts in California. With the institution of this program, the League of California Cities and the California State Association of Counties can offer their memberships a cost-effective finance program for alternative energy.

Under the program, participating cities, counties and/or school districts enter into a Master Lease Agreement with CaLease Public Funding Corporation to establish the repayment obligation. Current market conditions dictate a fixed tax-exempt rate of approximately 5.35% to 5.85% for a ten-year lease term. The term of the lease is a maximum of ten years with a minimum finance amount of $250,000. The Master Lease Agreement is subject to credit approval.

Please contact James Hamill, California Communities Program Manager, at (800) 635-3993 ext. 16 to inquire about current rates, or visit www.cacommunities.com. The CaLease rate-term information and application packet are included in **Appendix D**.

California Power Authority's Public Leadership Solutions for Energy (PULSE) Loan Fund

PULSE offers public agencies tax-exempt financing to manage energy needs and costs. This loan fund provides flexible terms to a range of energy efficiency and clean on-site power generation technologies. Participating agencies will have access to transactions larger than those offered by other State energy loan programs.

Loan amounts must total $2 million or more per issuance, per borrower, and terms will match the expected life of the project. The Power Authority is accepting Expressions of Interest from public agencies. For more information, or to inquire, visit www.capowerauthority.ca.gov or

contact the Power Authority at (916) 651-9750. A complete introductory packet is included in **Appendix E**.

Revenue Bonds

Revenue bonds can be issued by local governments to finance renewable energy systems. Revenue bonds are repaid by the avoided energy costs over the life of the energy system; the bond does not increase taxes. In November 2001, the City and County of San Francisco passed a $100 million revenue bond to finance 40 megawatts (MW) of clean power from solar and wind generation.

Vote Solar
Efforts to repeat this success across the nation are underway with the assistance of Vote Solar, a San Francisco-based non-profit organization. Vote Solar offers assistance with solar bonds, feasibility studies, and educational campaigns. For more information on the San Francisco bond or Vote Solar, visit www.votesolar.org or call (415) 641-5874.

PowerShift
Power Shift, a Washington D.C.-based organization helps cities and counties weigh the costs and benefits of going solar. Power Shift offers a Solar Community Campaign Manual that provides information on the following: campaign time-lines, coalition-building, working with reporters, running press conferences, writing press releases, and educating local officials. PowerShift also offers a Clean Energy Calculator that evaluates the environmental and economic benefits of renewable energy and assesses the potential for revenue bonds as a means to finance municipal solar projects. Calculations are specific to the municipality, its available rooftop space, and bonding capacity. For more information, visit www.shiftpower.org or call (202) 299-9071.

The California Debt Investment Advisory Commission
The California Debt Investment Advisory Commission (CDIAC) in the State Treasurer's Office serves California local governments on policy issues and provides technical assistance in the areas of debt issuance and investments. The CDIAC technical assistance team can provide resources on debt issuance and financing opportunities for energy projects and smart growth projects. CDIAC conducts ongoing educational programs and courses for state and local officials on a variety of topics, including the mechanics of a bond sale, bond pooling techniques, and how to structure financing. For more details, visit CDIAC's website at www.treasurer.ca.gov/cdiac or call (916) 653-3269.

TOOLS FOR ECONOMIC ANALYSIS

Cost-effectiveness of a PV system can not be solely determined by its simple payback. It is important to consider long-term energy costs (with and without price escalation) and to compare these against the amortized cost of the PV system. Comparing cost per kilowatt hour (kWh) of a PV system against cost per kWh of current and future non-renewable grid-sourced electricity offers a more complete fiscal analysis. For example, large-scale municipal PV systems often have a simple payback of twelve to twenty years, depending on system design, local utility costs, and other factors. Based solely on simple payback, such a system would not be deemed cost-effective. However, when the cost of PV is compared against grid-sourced electricity over a 25-30 year period, the cost is comparable, and often slightly less expensive. An analysis performed by LGC for a proposed municipal PV system in Chico, California found that grid-sourced

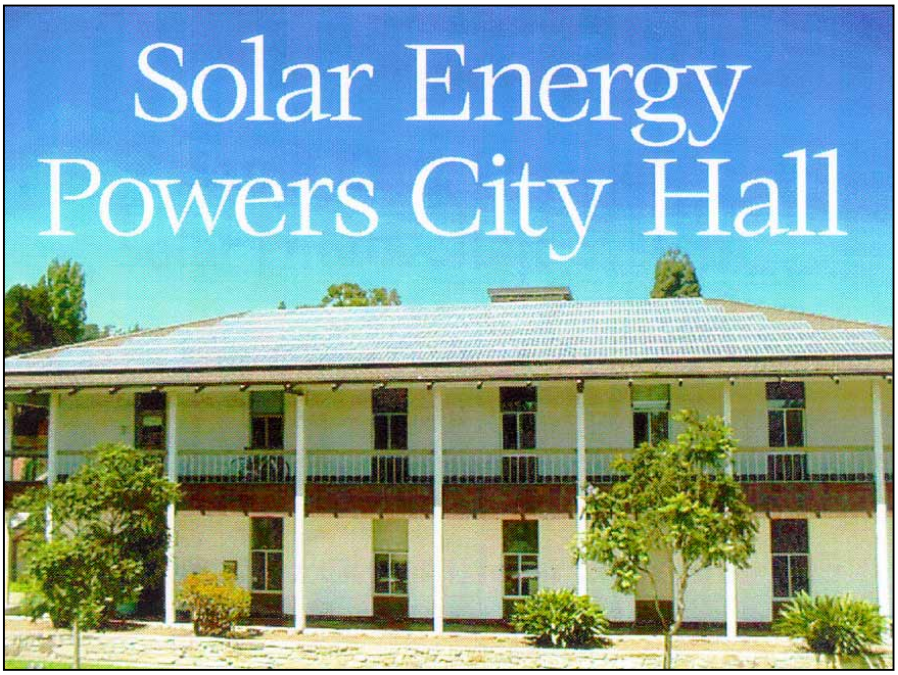
electricity averaged approximately $.016/kWh from 2000 – 2002 for city facilities, whereas, the cost of a PV system over 25 years would be $0.107/kWh, resulting in a net savings over the life of the project. The analysis did not take into account utility rate escalation, which would result in even greater cost-effectiveness.

Life cycle costing can help identify economic and environmental benefits that may not be reflected in standard accounting procedures. The State of California's Standard Practices Manual may be an effective tool to help with green accounting; contact Alison Pernell (apernell@lgc.org) for a copy of this document.

With the growing uncertainty of future electrical utility rates, merely being able to "lock in" energy costs for 25-30 years provides great benefit to local governments, allowing them to budget for fixed costs, rather than the unknown. Several free tools are available to aid in analyzing the economics of PV. The first step, prior to using any of these tools, is to identify your annual electric consumption in kWh and dollars for the facility under consideration.

PV Calculator Worksheet

This simple tool developed by the Renewable Energy Development Institute can provide an approximation of relative PV costs and benefits. This is a good place to start to determine projected 30-year electricity costs, approximate size of PV system to meet your electrical needs, roof space needed to support this system, cost per kilowatt hour, and simple payback. The PV calculator worksheet is provided on the following page.



The City of Santa Cruz installed a 14 kW PV system on its city hall annex that will generate on average 25,000 kWh of electricity annually — enough for about 7% of the power used in the annex.

PV CALCULATOR WORKSHEET

Your current electric consumption (A) = _____ kWh/yr

Your current electric bill (B) = $ _____ / year

Projected 30-year electricity cost:

• with no price escalation: (B) x 30 years x 1.00 = $_____

• with 1% price escalation: (B) x 30 years x 1.16 = $_____

• with 5% price escalation: (B) x 30 years x 2.20 = $_____

Amount of PV energy (C) needed to meet your annual electric load:

(A)_____ ÷ full sun hours _____ hr/yr = (C) _____ kW
Enter your "full sun hours," which range from 1,500 hr/yr in Northern CA to 1,750 hr/yr in Central CA to 2,000 hr/yr in Southern CA

Amount of unobstructed south access area needed to generate that load:

100 sq. ft. / kW x (C) _____ = _____ sq. ft.

Your Net Cost after Buydown:

PV Cost $_____ – Buydown $_____ = Net Cost $_____
PV Cost ranges from $6,000 to $12,000 per kW;
For buy-down amount, refer to "Rebate Incentives" section of this document

Your Cost per kWh: Net Cost $_____ ÷ (A x 30 yrs) = $_____ / kWh

To determine the "Simple Payback" of this PV system:

Net Cost $_____ ÷ 30-year electricity cost (with or without escalation) = (D)_____
D Value of 1 = break-even point, D < 1 = more savings than cost,
D > 1 more cost than savings.

How long it will take to pay back the system cost: (D) x 30 = ____ years

Clean Power Estimator

The Clean Power Estimator is a free on-line economic evaluation software program developed for the CEC's Consumer Energy Center. The program provides electric customers a personalized estimate of the costs and benefits of investing in a PV or small wind generation system. The Estimator takes into account electrical rates based on zip code, and calculates system cost based on rebate eligibility. The Estimator can calculate and graph annual and monthly energy consumption and production, net cash flow (costs and savings), and more. The Estimator is available at www.consumerenergycenter.org/renewable/estimator.

Software Resources

Building Life-Cycle Cost Software is available from the U.S. Department of Energy Federal Energy Management Program. This software allows one to look at future energy costs, making assumptions about energy escalation rates and energy consumption, and helps with 30-year energy cost-projections. For more information, visit www.eren.doe.gov/femp/techassist/softwaretools/softwaretools.html.

The Building Energy Software Tools Directory is available through the U.S. Department of Energy. The directory contains over 220 energy software programs to aid in energy modeling. Visit the web site at www.eren.doe.gov/buildings/tools_directory.

RENEWABLE ENERGY PROCUREMENT STRATEGIES

California local governments can choose from a number of options for renewable energy equipment and service procurement. These options include: 1) Issuance of RFPs for either component or "turn-key" energy systems; 2) direct equipment purchase from manufacturers, aggregators, or buying cooperatives; 3) bid-less procurement through the California Department of General Services CMAS Unit; or 4) third party contracts to provide energy systems and services. These options are discussed below.

REQUEST FOR PROPOSALS AND REQUEST FOR QUALIFICATIONS

Local governments have the option of issuing their own RFPs and RFQs for the design, purchase and installation of renewable energy systems. Many municipalities – including the City of Santa Monica, City of Santa Cruz, and City/County of San Francisco – have contracted with energy companies for municipal installations following issuance of an RFP. An RFP can cover an entire spectrum of services — including site assessment, system design, financing, installation, and energy management systems/software. Municipalities can contract with a systems integrator that can do everything from energy load analysis to public relations to financing to installation. A locality may wish to contract with an energy consultant or installer for a narrower scope of work, such as system design and/or installation.

Municipalities can also use an RFQ process to identify the most qualified candidate by weighing factors such as past experience and ability to serve the public-sector, without awarding the contract solely on the basis of lowest bid. The California Government Code Section 4217.12 allows for sole sourcing, whereby a municipality can circumvent the bid process and award a contract to the most qualified entity if a unique service/product is provided. Check with your city's, county's, or special district's attorney to determine whether sole sourcing is an appropriate option for your community (see discussion under "Installation").

In 2002, the California Power Authority issued three Request for Bids (RFBs) for solar PV equipment, stationary fuel cells and microturbines. A list of qualified bidders has been established and is available on the Power Authority's web site: www.capowerauthority.ca.gov/). Local governments may use this list to inform their procurement process.

A selection of renewable energy RFPs are available on LGC's website at: www.lgc.org/spire.

DIRECT PURCHASE OF EQUIPMENT FROM MANUFACTURERS, AGGREGATORS, AND BUYING COOPERATIVES

Solar PV and other distributed generation technologies can be purchased through aggregation to reduce equipment costs. Cities and counties may wish to either initiate their own aggregation effort, purchase though another aggregator, or a buying cooperative, in order to leverage lower pricing structures. Several options and opportunities are discussed below.

The City of Palm Desert negotiated a manufacturer direct purchase for 600 solar panels in 2001 following the issuance of an RFP. The single-page RFP was sent to six manufacturers and the city negotiated the price and quantity directly with the winning manufacturer. Through aggregation, the City reduced its costs and, through re-sale of the panels, was able to pass on significant savings to business- and home-owners. This RFP, and others, are available at www.lgc.org/spire.

A number of buying cooperatives throughout the state and the nation can provide aggregated procurement of PV and wind systems. Some cooperatives offer a service component that includes system design, installation by pre-qualified local professionals, and system monitoring. In addition, cooperatives can provide administrative services including refund reservation and fulfillment, permit approval processing and local utility approval. This method of procurement may be appealing to public-sector entities that could benefit from the full spectrum of technical and administrative assistance. Most cooperatives require membership. Check with your city's, county's, or special district's attorney to determine the legality of this option.

Cooperative Community Energy
Cooperative Community Energy is a PV buying cooperative located in Marin County, with satellite offices in Sonoma and Santa Cruz County. CCEnergy is a network of qualified professionals that can serve customers in all areas of California. CCEnergy provides a variety of technical and administrative functions. To learn more about how CCEnergy might serve your municipality visit www.cooperativecommunityenergy.com or call (415) 256-1748.

BIDLESS PROCUREMENT

The California Department of General Services' Procurement Division is the State of California's central purchasing and materials management agency. The Procurement Division is home to the California Multiple Award Scholarship (CMAS) Unit that establishes agreements with manufacturers/suppliers that offer products and/or services at reduced government pricing schedules. The program enables California State agencies and local government agencies, under delegation from DGS, to streamline purchases by removing repetitive, resource intensive, costly and time consuming bid processes. The CMAS Unit currently offers pre-packaged PV systems.

DGS contracts directly with suppliers that offer government pricing schedules. New contracts can be initiated by having the supplier contact the CMAS Unit directly. New contracts can also be adapted from the Federal GSA schedule. The GSA schedule currently offers pre-packaged PV systems. Visit www.gsaadvantage.gov to view pre-packaged solar equipment. If your local government is interested in pursuing new contracts through the CMAS Unit, contact the unit directly to inquire in detail about the process.

For more information on the CMAS Unit, visit www.pd.dgs.ca.gov/cmas or call (916) 324-8045. To download a copy of the "Smart Government Starts Here" local government agency packet, visit www.documents.dgs.ca.gov/pd/cmas/locagypck.pdf.

THIRD PARTY CONTRACTING AND LEASING AGREEMENTS

There are a number of companies around the state anxious to help large energy customers convert to renewable energy sources without having to pay initial or ongoing costs for a new energy system. Third party providers can contract with municipal customers to design, finance, purchase, install, and monitor renewable energy systems. The provider retains ownership of all or a portion of the system and profits by selling power to the host site at a set rate, under a multi-year contract. Third party providers enter into a Interconnection Agreement with the local utility to address terms and conditions, grid connectivity, and net metering arrangements. Municipal customers can benefit from a reduced electric rate for the renewable portion of their power, from free "green" publicity at no cost, and by hosting a renewable energy system without being burdened by details of financing and procurement!

There are significant benefits to contracting with a third party, as the consumer merely buys the electricity from the system with no capital cost and no operating liabilities. The third party model of procurement is a good option for the rapid installation of solar PV for the public sector. With private investors taking advantage of the tax benefits and rebates, where local governments cannot, it makes for a good marriage of public and private alliances.

In late 2002, the California Department of General Services issued an RFP for installation of distributed generation systems by third party owner/operators on State facilities. Once fully developed, the RFP and contract model will be made available to other agencies for local government adaptation. DGS will be available to help other government agencies with their procurement and project management under contract. The third party model has great potential for local government agencies that have a full range of facility types. For more information about DGS' third party contracting efforts, visit www.emd.dgs.ca.gov and search for the Energy Management Distributed Generation RFP (Contract # OEM 2002-03).

Leasing agreements may be negotiated directly with manufacturers to provide distributed generation systems, as is being done by the City of Vallejo. The City is contracting with BP Solar for a one MW PV power plant and with TMA Inc., a wind power company based in Cheyenne, WY, for a 500 MW wind farm. The City is contributing 10 acres for the PV plant and obtaining a $3.75 million grant from the California Energy Commission. BP Solar, a division of the international energy giant BP Amoco, will donate $3.75 million in construction and equipment costs and will install the $7.5 million modular power plant at no cost to the City. BP Solar and the City will divide revenue from power sales in a ratio to be determined. According to Larry Asera, the City's energy consultant, Vallejo's venture will be the first public- private partnership of this magnitude in the country. Financial benefits to BP Solar accrue in the form of depreciation and tax credits, along with revenues from power resale. This project allows the company to increase production, lowering component costs and ultimately making the price more attractive to potential future customers.

Because each of the third party contracting companies provide a unique scope of services, the best thing to do is to call them and inquire about how your community might benefit from a

public-private partnership. Each of the following companies is very interested in working with public sector renewable energy projects:

NORESCO
http://www.noresco.com/
Contact: Dick Good
(916) 366-7180
dgood@noresco.com

PFG Energy Capital
http://www.pfgenergy.com/
contact: Bill Garnet
(626) 584-0184
wgarnett@pfgenergy.com

Real Energy
http://www.realenergy.com/
contact: Tracy Saville
(916) 325.2500
tsaville@realenergy.com

Solar Commercial Roofing and Renewable Power Group
http://www.solarcommercialroofing.com/
contact: Ed Borray
(800) 537-1402
microutility@aol.com

World Energy Services and Technologies (WEST)
Contact: Rich Volker
(619) 299-6091

INSTALLATION CONSIDERATIONS

The public sector can contract with a variety of entities for installation and/or procurement of distributed generation systems — including cooperatives, third-party providers, system integrators and individual consultants or contractors. Regardless of the type of installer chosen, local government can be involved in installation at many levels. For example, Alameda County utilized the expertise of their engineer, Matt Muniz, P.E. to oversee installation of the Santa Rita Jail photovoltaic installation (installed under contract with the PowerLight Corporation). The City of Santa Cruz contracted with an energy consultant to oversee the entire process of a 14 kW rooftop PV system design and installation on the City Hall Annex. A middle school in Alameda partnered with the Solar School House, a local nonprofit organization, to organize a community-based installation workshop. While larger installations may lend themselves to "farming out" the job, a small demonstration project might be the perfect opportunity to use in-house expertise or to hold a city/county-sponsored installation workshop.

California Government Code Section 4217.12 provides for sole sourcing (for charter cities and counties) if there is a unique service or commodity provided. Under this code, the City of Santa Cruz awarded a contract to the most *qualified* candidate. Alameda County did not issue an RFP, and instead sole-source negotiated with PowerLight, using the provisions under the code. The County found that their supplier's system is the only patented, Underwriters Laboratory approved, PV system that uses state-of-the-art thin film PV modules backed with R-10 rigid polystyrene foam insulation, and the supplier is the only certified Northern California-based contractor to install a such a system over 50kW. The system is also the only roof tile PV system that is certified by the CEC, and is the only PV system in the market to provide all of these benefits. Although not required for this project, GSA's purchasing agent approved a sole source justification waiver for the project. Check with your city's, county's, or special district's attorney to determine if sole sourcing for installation is an option that will work for your municipality.

If procurement is handled separate from installation (as in the case of a CMAS purchase), an RFP may need to be issued for system design and/or installation. California Government Code Section 4217.10-4217.18 provides for a design/build bid process. The County of Marin utilized this code to issue a Design/Build RFP for a 100 kW rooftop PV at the County Civic Center.

FREE TECHNICAL ASSISTANCE

Local Government Commission

Through LGC's web site (www.lgc.org/spire), the following resources are available:

- The *Renewable Energy Assistance Packet: A Compendium of Resources for Local Governments*
- Fact sheets on municipal renewable energy installations, plans, and policies
- Local policy documents that support renewable energy
- RFPs for PV equipment purchase and installation
- PowerPoint presentation about renewable energy
- NREL study on the solar capacity of California local government facilities

National Renewable Energy Laboratory

The National Renewable Energy Laboratory (NREL) can provide assistance with site analysis and feasibility studies. A leader in energy efficiency and renewable energy research, NREL can perform economic and environmental analysis of local government renewable energy projects. Visit www.nrel.gov or contact (303) 384-6546 for more information.

CEC's Energy Partnership Program

Additional assistance can be provided through the CEC's Energy Partnership Program. This program helps local governments identify and install energy-saving projects and will pay the first $10,000 of engineering costs. They are able to provide a preliminary assessment of facilities at no cost, and can share the cost of engineering consultants who can help with energy audits, engineering feasibility studies, preparing equipment performance specifications, and selecting Energy Service Companies (ESCOs) and other contractors. The CEC's technical staff can provide information on project and funding options at no cost, and can even assist in preparing presentation before governing boards. A summary of the program can be found in **Appendix F**. To find out more about the Energy Partnership Program, contact the CEC at (916) 654-4008 or visit www.energy.ca.gov/efficiency/partnership/.

US DOE's Brightfields Program

The US Department of Energy's Brightfields program provides assistance to governments wishing to revitalize communities through the reclamation of brownfield properties and the inclusion of solar energy systems. According to the US DOE, a Brightfield is an abandoned or contaminated property ("brownfield") that is redeveloped through the incorporation of solar energy. Brightfields address economic development, environmental cleanup, and air quality challenges by bringing solar energy and high-tech solar manufacturing jobs to brownfield sites. For example, a recent report found that the placement of solar arrays on landfills within San Diego city limits could convert these sites from non-revenue generating city property into a revenue- and electricity-generating asset for the city of San Diego, while meeting environmental goals. Local governments are encouraged to identify brownfield sites in their communities and contact a Brightfields representative to begin an assessment process. For more information, visit www.eren.doe.gov/brightfields, or contact Heather Mulligan at the Western Regional DOE office at heather.mulligan@ee.doe.gov or call 206-553-7693.

Workshops

For a list of upcoming renewable energy or green building workshops, check the following sources:

California Solar Center
http://www.californiasolarcenter.org/events

City of San Jose's Green Building Program
http://www.ci.san-jose.ca.us/esd/GB-HOME.HTM

San Diego Regional Energy Office
http://www.sdenergy.org/events/

SMUD Energy and Technology Center
(888) 742-7683
http://www.smud.org/etc/programs/calendar.html.

PG& E Pacific Energy Center
415.973.7268
http://www.pge.com/pec/classes

Appendix A — Solar Photovoltaic Fact Sheet

Solar Photovoltaics

RENEWABLE ENERGY PROGRAM

CALIFORNIA ENERGY COMMISSION

Solar energy is a renewable resource that is inexhaustible and readily available, unlike fossil fuels such as coal, oil and natural gas. Fossil fuels were formed over millions of years from carbon-based material found in plants and animals. They need to be found, extracted from the earth and then processed for use. When fossil fuels are burned, they release pollutants into the air that are very harmful to humans and the environment. On the other hand, solar electricity is a free source of fuel that is clean and can be used to make more environmentally-friendly electricity. Electricity can be produced from sunlight through a process called photovoltaics (PVs), which literally means light energy.

The Ferris wheel at the Santa Monica Pier is powered by the PV panel located on top of the blue shed. Funding was provided by the California Energy Commission's Public Interest Energy Research Program (PIER).

Photovoltaics is a high-technology method of using the photons within sunlight to generate electricity. PV cells are made of at least two layers of semiconductor material. One layer has a positive charge, the other a negative charge. When sunlight enters the cell, some of the photons from the light are absorbed by the semiconductor atoms, freeing electrons from the cell's negative layer to flow through a circuit and back into the positive layer, producing an electric current. Dozens of individual cells can be arranged together in a sealed, weatherproof package to form a module to produce more energy. Modules can then be fitted into an array, which produces electricity based on the number and efficiency of the modules. The flexibility of the modular PV system allows designers to create solar power systems that can meet a wide variety of electrical needs, large or small.

PV cells have been used for many years, first to power satellites and then to power more common items that require small amounts of electricity such as calculators, watches, water pumps and emergency call boxes. As the cost to produce PV cells has decreased and their conversion from light-to-electricity efficiency has increased, they are being used today to provide electricity directly to businesses, schools, homes and boats.

Over two billion people in the world today live without electricity from transmission lines. Most of these people get electricity from diesel generators that are unreliable, noisy, cause air pollution and use a toxic fuel that must be transported to them. In most cases where there is no utility electricity available, it is because power transmission lines are too expensive to build and extend to their location. PVs provide a clean, reliable, cost-effective solution. In parts of the world where electricity is plentiful, businesses, schools and homes are installing PVs to offset the cost of electricity or provide reliable electricity at peak-use times as well as help the environment. These applications range from stand-alone PV arrays to roof-integrated PV panels. In addition, large arrays of PVs are built and maintained by power companies to provide significant amounts of electricity to the power grid.

For more information, contact the California Energy Commission Call Center at **1-800-555-7794** or visit our Web Site at:
www.energy.ca.gov/renewables

Printed on recycled paper

P500-00-011

Appendix B — Institutional Financing Options for Renewable Energy Systems

Institutional Financing Options For Renewable Energy Systems

CALIFORNIA ENERGY COMMISSION

Renewable Energy Program
1516 Ninth Street, MS 45
Sacramento, CA 95814-5512

Renewable Energy
-The Power of Choice-

For information on renewable energy options and incentives in California

Energy Commission Website
www.consumerenergycenter.org

Energy Commission Call Center
1-800-555-7794

Future Energy Investments

Are you interested in reducing your energy costs by using renewable energy, but do not have the capital to afford the equipment? This fact sheet highlights the various loan programs currently available.

Loan Program Basics

Loan products can be divided into two categories – secured and unsecured. As a general rule, unsecured loans have shorter terms (up to 36 months) and relatively high interest rates. Secured loans generally have longer terms and relatively lower interest rates, with the rate and term dependent upon the strength of the collateral. Similar real property secured loans are available to some institutions and have access to tax-exempt bond funds for the construction of new facilities and modernizations.

Subsidized and loan guaranty programs are available from certain lenders providing a range of lending products. Generally these loans are offered with a 'guaranty' by a state or federal agency to secure the loan.

Institutional Resources

On the reverse, you will find a list of lenders that offer attractive financing solutions. This fact sheet details a variety of financial loan products targeted directly at investments in renewable energy. To find out more about specific financing options, log onto the web addresses detailed for the particular lender you are interested in, or use the contact telephone numbers listed. Please visit the Energy Commission's website or call the Energy Call Center (see left) for information on renewable energy options and incentives in California.

LOAN EXAMPLES ($27,500)			
Term and Rate	**5 years @ 5%**	**10 years @ 6%**	**15 years @ 7%**
Monthly Payment	**$519**	**$305**	**$247**

A school in Concord with an annual electricity bill of $12,000 is considering the purchase of a 5 KW photovoltaic (PV) system with an installed cost of $50,000. After receiving the Energy Commission "rebate" of $22,500 the net cost of the system would be $27,500. Savings in year one from PV electricity production at their current utility rates is projected to be $1,459. If they finance the net cost of the system of $27,500 with a 15 year tax-exempt lease at 6% interest it would result in an annual payment of $2,966. For this example, the simple payback term for this system would be 18.8 years. If electricity rates continue to rise the payback time would be shorter. If you would like to evaluate the savings for your situation, use the Clean Power Estimator found at the Energy Commission website (see left).

Assumptions: Annual electricity production from the PV system in Concord is estimated to be 9,131 kWh. The annual electricity used was 70,076 kWh. The current utility rates for this example range from about $.14 to $.23 per kWh. There are no tax savings for non-profit and government entities that are exempt from income taxes.

Institutional Financing Options For Renewable Energy Systems

	Loan Program	Contact	Loan Amount	Term	Interest Rate
Unsecured Loans	Public Sector Loans	Academic Capital www.academiccapital.com tel: 800.589.4532	No limit	Up to 20 yrs	Below prime
	Public Sector Loans	Credit America www.creditamericafunding.com tel: 800.422.9977	No limit	Up to 20 yrs	Below prime
	Public Sector Loans	GE Capital www.gecapital.com tel: 800.460.5442	No limit	Up to 20 yrs	Below prime
	Loans for Energy Efficiency	California Energy Commission www.energy.ca.gov tel: 800.555.7794	$2 mil max	Life of equipment	Fixed
Equipment Secured Loans	Calease	California Communities www.cacommunities.com tel: 800.635.3993	Varies	Varies	Below prime
	Energy Efficiency Improvement Loan Program	Safe-Bidco www.safe-bidco.com tel: 818.552.3210	$250,000 max up to 10 yrs savings	5 yrs	5.00%
	GS$Mart	California Department of General Services www.dgs.ca.gov/pd tel: 916.327.5573	Equip value	1 to 10 yrs	Fixed
	Public Sector Lease	Academic Capital (as above)	90% value	Life of equipment	Prime or below
	Public Sector Lease	Credit America (as above)	90% value	Life of equipment	Prime or below
	Public Sector Lease	GE Capital (as above)	90% value	Life of equipment	Prime or below
	Public Sector Lease	Rural Alliance, Inc. www.rcrcnet.org tel: 916.447.4806	No limit	3 to 15 yrs	5.2% to 6.1%
Real Estate Secured Loans	Collateral Mortgages	Collateral Mortgage, Ltd. www.collateral.com tel: 205.978.1840	$500,000 +	up to 25 years	Market
	REDIP	CA Trade and Commerce Agency http://commerce.ca.gov/business/small tel: 916.322.1275	$1 mil	15 to 20 yrs	6.50%
	State Revolving Fund	California Infrastructure & Economic Development Bank tel: 916.322.1398	Project based	up to 30 years	Market
Subsidized Loans	CA School Finance Authority Smart Bonds Program	California School Finance Authority tel: 916.653.4156 or 213.620.4467	No limit	5 to 25 yrs	Prime or below
	EEFP	California Energy Commission (as above)	$2 mil max	7 yrs	5%
	Energy Assessment Revenue Bond program	California Department of General Services (as above)	Project based	< 8 yrs	6%
	Rural Utility Service	USDA Rural Utility Service www.rurdev.usda.gov/rd/ tel: 530.792.5800	$500,000-$5 mil	Negotiated	Fixed or variable
	Small Business and Non Profit Energy Efficient Improvement	Safe-Bidco www.safe-bidco.com tel: 800.273.8637	Varies	5 yrs	5%
	Utility Loan	Sacramento Municipal Utility District (SMUD) www.smud.org tel: 888.742.7683	No limit	10 yrs max	8.7 to 10.5%
	CAEATFA	California Alternative Energy and Advanced Transportation Financing Authority tel: 213.620.4467	Tax-exempt revenue bonds $3 mil avg	Up to 25 yrs	Below prime
Guaranty Loans	Community Facility Loan	Rural Community Assistance Corporation www.rcac.org tel: 916.447.2854	$2.5 mil max	up to 25 yrs	5.50%
	ESCO	California Department of General Services (as above)	N/A	5 to 15 yrs	N/A
	Rural Housing Service	USDA Rural Housing Service (as above)	$100,000-$2 mil	30 yrs	Fixed & Variable
	Water / Wastewater Treatment Loan	Rural Community Assistance Corp (as above)	$2.5 mil max	up to 25 yrs	5.50%
Third Party Loans	ESCO	California Department of General Services (as above)	No limit	5 to 15 yrs	Share of savings
	Energy Purchase Agreement	World Energy Services Technologies Tel: 619.696.0978	No limit	No limit	Discount prices
	ESPCO and Super ESPCO	Federal Energy Management Program (FEMP) www.eren.doe.gov/femp/financealt.html tel: 800.353.3732	No limit	5 to 15 yrs	Share of savings

The California Energy Commission does not endorse any one lending organization. Eligibility varies for each financing option. Availability of financing options may vary. Contact individual provider for more information.

Appendix C — CEC Energy Efficiency Financing Packet

ENERGY EFFICIENCY FINANCING APPLICATION

Loans 4% Interest Rate

Schools

Hospitals

Local Government

Special Districts

Public Care Institutions

GRAY DAVIS, *Governor*

California Energy Commission

Financing For Energy Efficiency

Who is Eligible?

- Public or Non-profit Schools and Colleges
- Cities
- Counties
- Public or Non-profit Hospitals
- Special Districts
- Public or Non-profit Public Care Institutions

What Types of Projects are Eligible?

Purchase and install commercially available energy efficiency equipment with proven energy and/or capacity savings, including but not limited to:

- Lighting
- Motors and pumps
- Heating and air conditioning systems
- Automated energy management systems and controls
- Cogeneration equipment
- Light emitting diode traffic signal modules
- Renewable energy systems
- Thermal Energy Storage systems
- Energy audits/feasibility studies

Projects already funded with an existing Energy Commission loan are ineligible. Call to discuss project eligibility.

Project Start Date The Energy Commission must have your application on file before you can start your project. However, only project-related costs that are paid for after the Energy Commission's Efficiency Committee approval may be included in the loan request. The applicant assumes all financial risk should the Committee disapprove the application. If the loan is disapproved for any reason, the Energy Commission is not responsible for reimbursement of any costs.

What Types of Facilities are Eligible? Existing buildings or other energy using facilities. Some new buildings and facilities. Call to discuss eligibility.

How Much is Available? Call for latest funding availability for financing eligible energy efficiency projects. Loans can finance up to 100 percent of the project costs.

When Should I Submit My Application? This solicitation is a continuously open program with no final filing date. Applications for funding will be accepted on a first come, first served continuous basis, reviewed by a technical review committee, and awarded based on project merit. The Energy Commission reserves the right to close the solicitation period at any time.

Criteria for Loan Approval Energy efficiency projects must be technically and economically feasible. Loans must be repaid from energy savings within 11 years, including principal and interest. This translates to an approximate 8.5-year simple payback.

$$\text{Simple Payback (yrs)} = \frac{\text{Amount of Loan (\$)}}{\text{Anticipated Annual Energy Cost Savings (\$/yr)}}$$

Interest Rates The interest rate is 4.0 percent and it will be fixed for the term of the loan.

Loan Security Requirements For public entities, loans are secured by a promissory note and a loan agreement between the applicant and the Energy Commission.

Nonprofit organizations may be required to secure the loan through sufficient assets, a deed of trust, certificate of deposit, or other means as determined by the Energy Commission.

Repayment Terms The repayment schedule is based on the annual projected energy cost savings from the aggregated project(s), using energy costs and operating schedules at the time of loan approval. In some cases, the loan repayment schedule can be extended up to 11 years.

Applicants will be billed twice a year after the projects are completed.

How Will Funds Be Disbursed? The funds are available on a reimbursement basis. For each reimbursement request, receipts or invoices for expenses incurred must be submitted along with payment verification by your organization. In some cases, purchase orders for equipment or services may be accepted in lieu of actual receipts. The final 10 percent of the funds will be retained until the project is completed. Interest is charged on the unpaid principal computed from the date of each disbursement to the borrower.

The Application

How Do I Apply? Unless otherwise specified in the "Other Information" column, you must submit the following, otherwise your application is incomplete. For incomplete applications, information must be received within a specified time or the application will be returned unprocessed.

Application Package Items	Copies Needed	Other Information
☑ Completed and signed loan application	Original plus one copy	
☑ Completed Summary of Recommended Energy Efficiency Measures in Loan Request Table	One copy	
☑ Feasibility Study*	One copy	Study must describe proposed energy efficiency projects, including calculations and assumptions to support the technical feasibility and energy savings. The study must also contain: a) proposed budget detailing all project costs, and b) proposed schedule for implementation of the projects
☑ Copy of a signed resolution, motion, order, etc. from your governing board (see sample).	One copy	The resolution need not be submitted with the application, but it must be received by the time of final loan package signatures. The title of the official signing the loan agreement should be the same one named in the resolution, motion, or order.
☑ Additional items for nonprofit organization: 1) Internal Revenue Service (IRS) Letter of Determination and 2) most recent financial statement audit covering a 12-month period.	One copy	Nonprofit organizations should call before applying.

***** If you are submitting multiple applications, please put each application package in a separate envelope. If the energy audit/feasibility study is used to justify energy efficiency projects in multiple applications, submit one copy of the audit/ study and indicate the application package that contains the audit/study.

Where Do I Submit My Application?
Send your application package with the specified copies to:

California Energy Commission
Non-Residential Buildings Office
Attn: ECAA Loan Program
1516 Ninth Street, MS #26
Sacramento, CA 95814-5512

Who Do I Call?

Call the California Energy Commission at (916) 654-4008 to discuss project and facility eligibility, funding availability, and application requirements.

Energy Commission staff will review your application and contact you within 15 days. It may be necessary to arrange a site visit to discuss your project and loan request.

Gray Davis
Governor

Mary D. Nichols
Secretary for Resources

California Energy Commission

William J. Keese
Chair

Commissioners
James D. Boyd
John L. Geesman
Robert Pernell
Arthur H. Rosenfeld

Steve Larson
Executive Director

October 2002

APPLICATION FOR ENERGY COMMISSION FINANCING

1. APPLICANT INFORMATION

Applicant: _____

Mailing Address: _____
City Zip

Street Address: _____
City Zip

County: _____

Contact Person: _____ Title: _____

Telephone: _____ Fax: _____

E-mail address: _____

2. PROJECT INFORMATION

A. Have you already applied for utility rebates and incentives for the projects that you are requesting loan funding?

- ❒ Yes, Go to Item B
- ❒ No, we have not applied but plan to do so in the future, Go to Item B
- ❒ No, we do not plan to apply for any utility rebates, Go to Question 3
- ❒ Don't know what programs are available, Go to Question 3

B. If you have applied for utility rebates or plan to do so for the projects in your loan application, please indicate:

Name of Utility: _____
Name of Utility Efficiency Programs: _____
Estimated Amount of Rebate, if known: _____

3. PROJECT SCHEDULE

Tentative project start date: _____
Tentative project completion date: _____

4. PROJECT BUDGET

Total project costs (include all installation costs): _____
Amount requested from the Energy Commission: _____

5. CERTIFICATION

To the best of my knowledge and belief, the data in this application are correct and complete.

Name of Authorized Representative: _____

Title: _____

Signature of Authorized Representative: _____

Date: _____ Telephone: _____ Fax: _____

Summary of Recommended Energy Efficiency Measures in Loan Request

For each application, list the projects for which you are requesting a loan and identify the savings, project cost and payback for each project. Total the savings and project cost at the end of the table. Insert more rows as needed.

Project	Peak Demand Savings (kW)	Annual Electric Savings (kWh)	Annual Natural Gas Savings (therms)	Annual Other Energy Savings (specify units)	Annual Cost Savings	Project Installation Cost	Simple Payback (years)
Example: Install T8 lamps and electronic ballast	48	266,405	0	0	$24,113	$100,790	4.2
TOTAL							

SAMPLE RESOLUTION

RESOLUTION NO.

Resolution of

_____

Name of Institution or Organization

WHEREAS, the California Energy Commission provides loans to schools, hospitals, local governments, special districts, and public care institutions to finance energy efficiency improvements;

NOW THEREFORE, BE IT RESOLVED, that _____
Governing Body
authorizes _____ to apply for an energy efficiency
Name of Institution or Organization
loan from the California Energy Commission to implement energy efficiency measures.

BE IT ALSO RESOLVED, that if recommended for funding by the California Energy Commission, the _____ authorizes _____
Governing Body *Institution or Organization*
to accept a loan up to $_____
Loan amount requested

BE IT ALSO RESOLVED, that the amount of the loan will be paid in full, plus interest, under the terms and conditions of the Loan Agreement and Promissory Note of the California Energy Commission.

BE IT FURTHER RESOLVED, that _____ is hereby
Title of Designated Official
authorized and empowered to execute in the name of _____
Institution or Organization
all necessary documents to implement and carry out the purpose of this resolution, and to undertake all actions necessary to undertake and complete the energy efficiency projects.

Passed, Approved and Adopted this ___ day of _____, _____.
Month *Year*

Governing Board Representatives:

_____ _____

_____ _____

_____ _____

Appendix D — California Communities CaLease Finance Program

CALEASE FINANCE PROGRAM FOR ALTERNATIVE ENERGY

Utilizing the same approach as the CaLease Equipment Lease Program, the intent of alternative energy program is to privately place all Photovoltaic System ("PV") financings for local government and school districts in California. With the institution of this program, the League of California Cities and the California State Association of Counties can offer to its membership a cost-effective finance program for alternative energy.

Under the program, participating cities, counties and/or school districts would enter into a Master Lease Agreement with CaLease Public Funding Corp. to establish the repayment obligation.

Current market conditions would dictate a fixed tax-exempt rate of approximately 5.35% to 5.85% for a ten-year lease term. The term of the lease is a maximum of ten years with a minimum finance amount of $250,000, and subject to credit approval.

Please contact James Hamill at (800) 635-3993 ext 16 with any questions or to request an application.

CALIFORNIA COMMUNITIES

CALEASE Application

APPLICANT INFORMATION

Date: _____ County: _____

Government Name: _____

Department Name: _____

Street Address: _____

City: _____ State: _____ Zip Code: _____

Contact Name: _____ Title: _____

Signature on Documents: _____ Title: _____

Telephone: _____ Fax Number: _____

Email: _____ Tax ID Number: _____

Insurance Provider: ☐ Robert F. Driver ☐ Self Insured ☐ Other _____

Does your public agency plan to issue more than $10 million in debt during the current calendar year? ☐ Yes ☐ No

PROJECT INFORMATION

Equipment Description: _____

Equipment Cost: $ _____ ☐ New ☐ Refinance ***(see page 2)***

Date of Equipment Acquisition: _____ Anticipated Funding Date: _____

Preferred Finance Term: _____ ☐ Years ☐ Months

Preferred Payment Schedule: ☐ Monthly ☐ Quarterly ☐ Semi-Annual ☐ Annual

Payments will be made: ☐ Advance ☐ Arrears

Building Description: _____

☐ New Construction ☐ Rehabilitation of Existing Bldg ☐ Refinance (***see page 2***)

Building Cost: $

Preferred Finance Term: _____ ☐ Years ☐ Months

Preferred Payment Schedule: ☐ Monthly ☐ Quarterly ☐ Semi-Annual ☐ Annual
Payments will be made: ☐ Advance ☐ Arrears

EXISTING LEASE REFINANCE FORM

LEASE 1: Approximate Principal Outstanding: $ _____
Current Interest Rate: _____ %
Approximate Remaining Term: _____ ☐ Years ☐ Months
Payments Are Made: ☐ Monthly ☐ Quarterly ☐ Semi-Annual ☐ Annual
Prepayment Penalty: _____ %
Or Pay Off Amount: $ _____
(Principal plus any prepayment cost)

LEASE 2: Approximate Principal Outstanding: $ _____
Current Interest Rate: _____ %
Approximate Remaining Term: _____ ☐ Years ☐ Months
Payments Are Made: ☐ Monthly ☐ Quarterly ☐ Semi-Annual ☐ Annual
Prepayment Penalty: _____ %
Or Pay Off Amount: $ _____
(Principal plus any prepayment cost)

LEASE 3: Approximate Principal Outstanding: $ _____
Current Interest Rate: _____ %
Approximate Remaining Term: _____ ☐ Years ☐ Months
Payments are Made: ☐ Monthly ☐ Quarterly ☐ Semi-Annual ☐ Annual
Prepayment Penalty: _____ %
Or Pay Off Amount: $ _____
(Principal plus any prepayment cost)

FOR MORE INFORMATION OR TO SUBMIT AN APPLICATION

TELEPHONE: (800) 635-3993, Ext. 12 or Ext. 20
FAX: (925) 933-8457
E-MAIL: info@cacommunities.com
WEBSITE: www.cacommunities.com
MAIL: CALIFORNIA COMMUNITIES
2175 N. California Blvd., Suite 550
Walnut Creek, CA 94596

Appendix E— California Power Authority's PULSE Financing Packet

California Power Authority

Public Leadership Solutions For Energy (PULSE)

An Innovative Energy Loan Fund

January Update:

- **Loan window open through February for bond issue in Spring!**
- **Stretch local bond authority -- finance energy features via PULSE.**
- **Can generate positive cash flow – manage your operating budget**

- ✓ ***Stretches funding to enable cost and energy savings***
- ✓ ***Turnkey financing team to facilitate implementation***
- ✓ ***Financing available to all State and local agencies & 501(c)3 corporations***
- ✓ ***Increased flexibility for terms and eligible projects compared to existing State energy financing programs***

In its mission to invest in long-term, reliable, clean energy for our State's future, the California Power Authority offers a new financing solution.

PULSE offers public agencies tax-exempt financing to manage energy needs and costs. This loan fund provides flexible terms to a range of energy efficiency and clean on-site power generation technologies. Participating agencies will have access to transactions larger than those offered by other State energy loan programs.

Financing Structure:

Lease financing enables cost and energy savings without a requirement to obtain a public vote

Financing Team:

- Sponsor/Program Administrator: California Power Authority
- Financial Advisor: Public Financial Management, Inc.
- Bond Underwriter: Goldman, Sachs & Co.
- Bond Counsel: Sidley Austin Brown & Wood LLP

Eligible Projects:

Virtually all energy conservation and clean generation technologies

Loan amounts:

$2 million or more per issuance, per borrower (district-wide portfolios of projects are included), unlimited loan size

Repayment periods:

Up to the expected life of the project

Estimated Availability:

Two to three issuances per year

For more information please visit the California Power Authority's website:

www.capowerauthority.ca.gov
Phone: (916) 651-9750
Email: cpapublicloans@dgs.ca.gov

STATE OF CALIFORNIA

CONSUMER POWER AND CONSERVATION FINANCING AUTHORITY

October 30, 2002

Dear Colleague:

We invite cities, counties, special districts, schools and community colleges across California, as well as State and other local agencies to **take advantage of the "PUblic Leadership Solutions for Energy (PULSE)" fund to help manage your energy needs and costs**. This new loan pool overcomes limitations of other State energy loan programs by supporting larger transactions, a broader range of eligible technologies, and longer loan terms.

We would be interested in your expression of interest as to whether you might use this loan program in the next 1-2 years. PULSE will issue bonds several times each year and your response will help us gauge the size of future energy bond issues. This does not commit your organization to borrowing funds.

The PULSE Fact Sheet provides more specifics on the loan program. Also attached is a sample Expression of Interest, a few Threshold Questions to provide some project specific information, as well as sample case studies. Additional information, including responses to Frequently Asked Questions, is available on the PULSE website at www.capowerauthority.ca.gov/financing/PULSE.html.

I invite your consideration of this proposed program and welcome your expression of interest, as well as any suggestions or changes that you might propose. Specific questions can be directed to Jeanne Clinton, PULSE project manager, at (916) 651-9750 or to cpapublicloans@dgs.ca.gov.

Sincerely,

Jeanne Clinton
Deputy Director Conservation & Distributed Generation

901 P Street, Suite 142A, Sacramento, CA 95814
Tel: (916) 651-9750 Fax: (916) 651-9595 E-mail: cpapublicloans@dgs.ca.gov

Public Leadership Solutions For Energy (PULSE)

FACT SHEET

Mission: The California Consumer Power and Conservation Financing Authority (the "Power Authority" or CPA) was created by the State Legislature in August 2001. Its mission is to furnish the citizens of California with reliable and affordable electrical power, ensure sufficient power reserves for a stable energy market, and encourage energy efficiency, conservation and renewable energy resources. Our Energy Resource Investment Plan targets up to $1.5 billion in financing energy investments in public buildings.

Eligible projects:

- Energy efficiency
- Advanced building metering and controls
- Thermal storage
- On-site renewable energy (solar PV, small scale wind, biogas and landfill gas recovery)
- On-site distributed generation (fuel cells, micro-turbines, combined heat & power)
- Incremental costs of exceeding Title 24 building energy standards in new construction and major renovations (for "green" or "sustainable" buildings)

Loan amounts: $2 million or more per issuance, for a portfolio of projects within a jurisdiction, no maximum.

Repayment periods: Up to the expected useful life of the project.

Financeable costs: Feasibility and engineering design, performance guarantees, equipment warranties, project management (managing bidding, equipment procurement, construction management, and commissioning the final outcome), and equipment and construction costs.

Financing Terms and Options:

- Tax-exempt market rates: short-term (1-5 years), about 3%; medium-term (6-15 years) ranging from 3-4.5%; longer-term (16-30 years) from 4.5-5.5%, up to projects' useful life.
- Fixed debt rates; future issuances may offer variable rate terms.
- Maturities flexible, consistent with borrower's project and cash flow needs.
- Normal requirements for use of assets financed with tax-exempt debt (i.e., cannot do anything that would jeopardize the tax status of the bonds).
- Bonds will be insured.
- The program will be self-supporting: no interest subsidies or "free" services are included, although agencies may finance most project-related costs.
- Agencies still can claim rebates, "buydowns", and grants from other sources.
- Anticipated multiple (e.g., semi-annual) bond issues, depending on demand.
- Utilize the Power Authority's "eligible bidders lists" and indicative price caps from distributed generation technology manufacturers, contractors, and system integrators. (See: http://www.capowerauthority.ca.gov/DistributedGeneration).

For Additional Information:
(916) 651-9750/cpapublicloans@dgs.ca.gov/ www.capowerauthority.ca.gov/financing/PULSE.htm

SAMPLE

Expression of Interest in the California Power Authority
PUblic Leadership Solutions for Energy (PULSE) Fund

[On your letterhead, or via E-mail to cpapublicloans@dgs.ca.gov]
[If your project plans are well along, please see additional information desired, on the next page.]

[date]

Ms. Jeanne Clinton
Deputy Director Conservation & Distributed Generation
California Power Authority
901 P Street, Suite 142A
Sacramento, CA 95814

Dear Ms. Clinton,

The _____(name of your jurisdiction) supports the California Power Authority's (CPA) proposed PUblic Leadership Solutions for Energy fund.

We would be interested in participating in a lending program offering tax-exempt interest rates and repayment terms conducive to investing in energy efficiency, renewable energy, and distributed generation technologies.

In the next 1-2 years, we estimate a need for approximately $_____ to invest in such projects. Ideally, we would like to utilize
$_____ million in proceeds by _____, 2003 and/or
$_____ million by _____, 2004.
We would be interested in utilizing the CPA's PULSE Fund for this purpose.

We do___ / do not__ have a published credit rating. This is _____.

The CPA currently indicates the rate will be fixed. We would / would not be interested in a variable rate if that were an option.

We look forward to working in partnership with the CPA and the State of California to make our government's energy use more efficient, cleaner, and cost-effective.

Sincerely,

Name
Title
Phone Number
Email address

Public Leadership Solutions For Energy (PULSE)

If your project plans are well along, and you are considering using our financing in the next 3-6 months**,** we invite you to provide the following additional information in your response letter or E-mail. This will help us evaluate your projects' eligibility and address other issues relevant to a successful financing.

I. Financial Information

1. Have you issued bonds for capital facilities within the past 2 years? How much? When?
2. Do you have a published credit rating? What is the most recent rating?

II. PULSE Funding

1. Why are you interested in PULSE funding specifically?
2. Have you explored other financing mechanisms, and to what extent? Which?
3. If you were unable to fund the project, can you tell us why?

III. Approval Process -- What is your agency's authorization process?

1. Who makes financial decisions?
2. Who makes energy/facilities decisions?
3. What Board/Council/Commission approvals are required?
4. Who makes the final decision and who is authorized to sign financial/legal documents?

IV. Timing Issues

1. Can you give us an idea of your project's readiness (feasibility studies, design, preliminary approvals, etc.)?
2. Do you have an idea how long your internal approval process might take?
    a. Which "sign-off" issues do you have in hand?
    b. Which need to happen?
    c. When will these occur?
3. What are your assumptions about when the project will be built (assuming funding is pending)
    a. When will you order/pay for equipment?
    b. When would construction begin?
    c. When do you anticipate the need to access funds? In what magnitude and for what purposes?

V. What additional information do you need from CPA?

1. Additional information and responses to Frequently Asked Questions are on our web site, www.capowerauthority.ca.gov/financing/PULSE.htm.
2. Do you have any preliminary questions not already addressed?

Thank you for submitting your interest in the PULSE loan fund. We are enthusiastic about this exciting new financing option and anticipate a productive working relationship with public agencies.

SAMPLE CASE STUDY

Alameda County – Santa Rita Jail

Alameda County implemented a three-phase plan in 2000 to reduce energy costs at the Santa Rita Jail by combining on-site solar electric generation with energy conservation and energy management measures. The partnership, including the County, PowerLight and CMS Viron, set a goal of exceeding the County's 10% internal rate of return for energy projects. The project components have reduced the Jail's peak power consumption by 30%. These measures include:

- Solar Photovoltaic (PV). The 1.18 megawatt PV roof installation is the U.S.' largest rooftop solar PV system and the fourth largest solar electrical system in the world.
- Cool Roof Membrane. The roof area not covered by PV panels was treated with a coating to reflect 65% of the solar energy, reducing the roof's temperature during summer months by 50 degrees Fahrenheit; this will substantially extend the roof's lifetime.
- Cooling Equipment Replacement. An 850-ton high efficiency chiller with variable speed drives delivers real-time cooling requirements to the chiller, water pumps, and cooling towers.
- Energy Management System. A software system automatically reduces peak power consumption during dips in solar-generated electricity; to manage the facility's maximum demand for power delivered to the grid.

Energy Savings. The Santa Rita Jail project diverts over 2.4 million kilowatt-hours from the grid annually. The 1.18 megaWatt PV roof installation generates about 1,460,000 kilowatt-hours and the cool roof, chiller, and other upgrades save an additional 1,000,000 kilowatt-hours.

Economic Savings. Gross project costs for the project, including roof repairs were about $9 million. The combination of State rebates and low-interest loans enabled the County to avoid general fund expenditures. Net savings to the County should be approximately $410,000 in 2002 or about $15 million over the project's 25-year life.

Other Benefits. The project will eliminate almost 38,000 tons of carbon dioxide and 24,000 pounds of nitrogen oxides over the project's life.

Prior Projects. The County previously implemented smart energy measures, including retrofitting over 12,000 light fixtures, and installing lighting controls and efficient motors at the Jail, with a payback of less than one year. By participating in PG&E's PowerSaving Partners program, the County has received over $2.3 million in direct incentive payments and reduced electricity costs at the jail by one-third.

At other Alameda County facilities, energy efficiency measures implemented have totaled over $4 million in annual cost avoidance. These measures included lighting retrofits in 95% of County-owned buildings, installing building automation systems in 25 facilities, replacing most chillers with energy efficient and CFC-friendly equipment, and installing variable frequency drives to the heating, ventilation and air conditioning systems in County facilities.

SAMPLE CASE STUDY

City of San Diego – The Ridgehaven Building, Environmental Services Department (ESD)*

The City of San Diego's ESD has undertaken multiple innovative energy-related projects. Ridgehaven, ESD's Administrative headquarters, is a "Green Buildings" project and was the first Energy Star Building designated by the U.S. Department of Energy and the Environmental Protection Agency. Projects include energy efficiency, indoor air quality, water conservation, construction waste reduction, and the use of recycled-content products.

Energy Savings. The Ridgehaven building saves 931,000 kilowatt-hours annually.

Economic Savings. Site energy cost savings are about $130,000 per year at current costs.

Other Benefits. The Green Building at Ridgehaven annually eliminates 353 tons of carbon dioxide and saves more than 485,300 gallons of water.

City of San Diego – Sustainable Building Policy*

City purchasing policies require energy star equipment and emphasize the importance of energy savings. This policy also provides an administrative incentive for City facilities to meet LEED standards. All city facilities have undergone lighting retrofits and staff has been trained in conservation measures. Preliminary energy audits have been completed on 20 City buildings, with energy improvements targeted for another 891,000 square feel of floor space.

Energy Savings. Lighting and equipment upgrades in over 2.5 million square feet provide estimated savings of 52 million kWh per year.

Economic Savings. Annual savings from building lighting and efficient equipment improvements are about $2.8 million.

Other Benefits. Carbon dioxide reductions from the combined city operations' projects were over 82,000 tons during the 1994-2001 time period.

Incentives utilized. California Energy Commission grants contributed to financing projects.

*The City of San Diego has developed many innovative energy savings, conservation and clean, distributed generation programs. Several additional projects are in the implementation or development stage. These are two examples of existing projects.

Appendix F — CEC's Energy Partnership Program

CALIFORNIA ENERGY COMMISSION

Energy Partnership Program

APPLY TODAY

FOR TECHNICAL ASSISTANCE

CITIES & COUNTIES

SPECIAL DISTRICTS

HOSPITALS & PUBLIC CARE

COLLEGES & UNIVERSITIES

Publication No. 400-01-025

THE ENERGY PARTNERSHIP PROGRAM
ENERGY-EFFICIENCY FOR PUBLIC AND NON-PROFIT FACILITIES

MAKE YOUR FACILITIES ENERGY EFFICIENT AND REAP BIG BENEFITS

Energy costs typically run three to ten percent of annual operating expenses. For the largest facilities, that can exceed $1 million per year! But you can control and decrease energy costs without sacrificing staff or compromising the quality of your operations. It is proven: Implementing cost-effective energy efficiency projects reduces annual utility bills by an average of 20 percent, and the savings continue year after year. You spend less for a more comfortable facility, and you conserve increasingly finite and expensive energy resources. Everyone wins.

The Energy Partnership Program

Whether you are building a new facility, modernizing an existing one, or simply want to know how to reduce your energy bills, the Energy Partnership Program can help you become more energy wise. This California Energy Commission program identifies cost-effective energy efficient systems and provides design and implementation assistance for your projects.

Here's how we can assist you

New Construction

Facilities built with energy efficient designs cost less to operate—that means continuous savings, leaving more money in the till. And the savings start from the first day of operation! Buildings that just meet the minimum energy efficiency standards can be improved with little or no additional expense, particularly if you get the Energy Partnership Program involved early in the design phase.

Who is eligible?

- Cities
- Counties
- Special districts
- Public or non-profit hospitals
- Public or non-profit public care facilities
- Public or non-profit colleges/universities

HERE ARE SOME OF THE WAYS WE CAN HELP WITH NEW CONSTRUCTION:

- **Provide design and specification consultation**
- **Identify cost-effective energy-saving measures**
- **Develop building simulation models of your planned project**
- **Provide life cycle cost analysis of energy-efficiency measures**
- **Help select design professionals with energy-efficiency expertise**

Existing Facilities

Use the Energy Partnership Program to target ways to improve the energy efficiency of your current facility. If the initial assessment identifies cost-effective projects, our experienced engineering consultants can develop the energy audits or feasibility studies to justify implementing these projects. The Energy Partnership Program identifies state loans and other financing to get these projects installed.

HERE'S WHAT WE CAN DO FOR YOU:

- Conduct energy audits and feasibility studies
- Review existing proposals and designs
- Develop performance specifications
- Review equipment bid specifications
- Assist with contractor selection

How much does Energy Partnership technical assistance cost?

The Energy Partnership Program uses experienced engineering consultants to help with your projects. The program will pay the first $10,000 of these costs. Any costs beyond the $10,000 will be your responsibility.

THE ENERGY PARTNERSHIP PROGRAM

THE APPLICATION PROCESS

HOW DO I APPLY ?

1. **Application.** Complete the enclosed application and Table 1.
2. **Supplemental Information.** Provide copies of any relevant information about your project—past energy studies, annual utility bills, information about energy-using equipment, and financial statements if you are a non-profit facility.
3. **Governing Board Resolution.** We may need a resolution from your governing board before providing technical assistance. After reviewing your application and conducting a preliminary site visit, the Energy Commission staff will inform you if a resolution is necessary.
4. **Mailing Instructions.** Mail your application and supplemental information to:

California Energy Commission
Energy Partnership Program
Nonresidential Buildings Office
1516 Ninth Street, MS 26
Sacramento, CA 95814-5512

HOW WILL YOU EVALUATE MY APPLICATION?

We use the following criteria to evaluate all applicants:

- **Commitment to implement the cost-effective project recommendations.** Applicants must demonstrate a strong commitment to implement the cost-effective project recommendations. This commitment must be clearly reflected in your application.
- **Project implementation schedule.** Applicants must have a near term plan for implementing the recommended projects.
- **Funds available for implementation.** Funding does not need to be secured when technical assistance is provided. But the applicant must demonstrate a commitment to securing funding for the recommended projects after Energy Partnership Program assistance.
- **Financial history.** To receive technical assistance, non-profit applicants must pass the Energy Commission's financial evaluation.

WHEN IS MY APPLICATION DUE?

The Energy Partnership Program is open continuously. There is no final filing date. But program funds are limited. A prompt filing will increase your chances of receiving assistance.

WHO DO I CALL WITH MY QUESTIONS?

You can find answers to your questions at the following:

Website:
www.energy.ca.gov/efficiency/partnership

Telephone:
(916) 654-4008.
Ask for the
Energy Partnership Program.

Email:
nonres@energy.state.ca.us

THE ENERGY PARTNERSHIP PROGRAM

THE PROCESS

APPLICATION

You provide information about yourself and your project.

EVALUATION

Energy Commission staff reviews your application and verifies your commitment to implementing the Energy Partnership Program recommendations.

SITE VISIT (OPTIONAL)

Energy Commission staff meets with your project team to discuss the project, review plans, and tour your facilities.

PROPOSAL

Based on the application and site visit, Energy Commission staff determines whether the Energy Partnership Program can provide technical assistance. The proposal may indicate potential energy efficiency projects, the estimated savings, benefits, and scope of the technical assistance, and the cost of the service.

ENERGY PARTNERSHIP PROGRAM SERVICES AGREEMENT

Energy Commission staff determines whether a Governing Board Resolution will be needed before providing technical assistance. If your agency will be sharing the technical assistance cost with us, a services agreement will be developed and signed by both of our agencies.

TECHNICAL ASSISTANCE SERVICES

The Energy Partnership Program provides the desired services identified in the Agreement.

PROJECT REVIEW

Your agency reviews and comments on the Energy Partnership Program technical documents and assistance and identifies the projects to be implemented.

FINANCING SECURED (OPTIONAL)

Your agency secures financing to implement and complete the projects. Some projects may qualify for loans from the Energy Commission.

INSTALLATION / CONSTRUCTION ASSISTANCE (IF REQUESTED)

The Energy Partnership Program consultants can help prepare preliminary equipment bid specifications, select contractors, review proposals and designs, and/or assist your contractors with project commissioning. During construction, Energy Commission staff can be available for consultation.

PROJECT COMPLETE

Energy Commission staff will be available for consultation after the project is installed. This is the start of lower annual energy costs and improved facilities.

What Past Participants Are Saying About the Energy Partnership Program

The best thing about the Energy Commission's program is that it's simple. Participating in the program allowed us to install new lighting and air conditioning.

Michael Lee
Director of Finance
City of Rio Vista

Due to projects installed as a result of the Energy Partnership Program, our energy consumption dropped so much that the local utility company pulled our meters to have them checked and recalibrated. I was amazed at the effect the projects had on our bill. In the first 12 months of operation, our jail's energy cost dropped 24 percent!

David Sokol
Support Services Manager
Shasta County Jail

The feasibility study we received from the Energy Partnership Program was instrumental in establishing a very successful, on-going energy management program in our City. The program worked for us, real savings occurred.

Michael Grimes
Public Works Department
City of Santa Barbara

As a result of the Energy Partnership Program, we now have a plan of action that will improve the way we serve our citizens, reduce energy consumption, and replace old equipment.

James A. Biery
Director of Public Works
City of South Gate

Our city has always wanted to improve the energy efficiency of its facilities but lacked staff time to start the process. The Energy Partnership Program helped us to move forward with our project. I would recommend it to other local governments.

Tony Dahlerbruch
Director of General Services
City of Beverly Hills

California Energy Commission
Energy Partnership Program
Nonresidential Buildings Office
1516 Ninth Street, MS 26
Sacramento, CA 95814-5512
www.energy.ca.gov/efficiency/partnership

September 2001